

UNDER SECRETARY OF STATE
FOR POLITICAL AFFAIRS
WASHINGTON

OCT 2 1970

Dear Minister Lefevre:

At the conclusion of our discussion on September 16-17 concerning possible European participation in the post-Apollo space program you requested that we provide a statement of our present views on several specific questions which you and your colleagues put to us, as well as on three of the general subjects which were discussed, i.e.: (1) availability of launch services and launch vehicles; (2) decision-making; and (3) access to information and facilities. These views are set forth in the numbered paragraphs which follow.

As I stated during the discussions, our views on these matters at this time are preliminary. Our ultimate views will depend on choices yet to be made in Europe as to the measure and character of European participation and on further development of our own plans for the Space Transportation System and Space Station.

Availability of U.S. Launch Services and Launch Vehicles --

1. We recognize the concern expressed by the European delegation with regard to the availability of launch services for European payloads in the event Europe chooses to participate substantially in the post-Apollo program.

The Honorable

Theo Lefevre,

Chairman,

European Space Conference,
Brussels, Belgium.

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2. In the event Europe so chooses, the U.S. would not exercise arbitrary or unilateral judgment regarding the acceptability of European payloads. On the assumption that European participation would be substantial, the U.S. would, as part of an international agreement governing such participation, be prepared to assure on a reimbursable basis:

(a) Launch services by means of the new Space Transportation System in the conduct of European space programs for any peaceful purpose consistent with relevant international agreements.

(b) During the period before the new Space Transportation System becomes operable, availability of U.S. launch services for any peaceful purpose consistent with relevant international agreements.

3. In further explanation, by "substantial" European participation we mean, for purposes of these assurances, a commitment of at least 10% of the resources required for the development of the Space Transportation System (estimated at about \$10 billion over a ten-year period). Such a commitment would be commensurate with the measure of the overall European space effort relative to that of the U.S. It could be met by the provision at European expense of significant new technology, the development of a major system or sub-systems, or some combination of these.

4. By "consistent with relevant international agreements" we mean, the obligations of the U.S. and European countries as contained in such agreements as the Outer Space Treaty and the INTELSAT agreement. (For a more precise explanation of our views as to the bearing of the INTELSAT Agreement upon the availability of U.S. launch services, see paragraphs 11-15 below).

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5. With respect to your question whether U.S. launch services would be available to individual European countries which participate in the development of the Space Transportation System, as well as to the participating European regional space organization,^{1/} we expect that those members of the regional organization which participate in the development of the Space Transportation System would have the same rights with respect to launch services for their payloads as would the organization itself for its payloads.

6. Thus, the U.S. would no longer determine availability of launch services for European payloads on a unilateral case-by-case basis, but would provide the blanket assurances described in paragraph 2 above. European and U.S. interests would, therefore, be on an equal footing with regard to the availability of launchings for possible commercially competitive purposes.

7. With respect to your question as to the financial conditions under which the U.S. would provide launch services for European payloads,^{2/} the U.S. would follow existing procedures which involve reimbursement for actual costs of (a) the purchase of launch vehicles from commercial sources, (b) transportation of vehicles to the launch sites, and (c) supporting services required in connection with the launch. The U.S. would not seek to recover the development costs of vehicles. Charges for support services would normally include the costs

^{1/} "Will the availability of launchers by the Government of the United States be guaranteed not only to Europe, considered as a whole, but also to each of the States participating in the program who are signatories of the Cooperative Convention?"

^{2/} "Under what financial conditions would the United States supply launch vehicles to Europe?"

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for range services, vehicle preparation and check-out, launch crews and administrative overhead. Other reimbursable services which might be agreed to on a case-by-case basis could include, for example, tracking and data acquisition, payload test and check-out, and procurement and assembly of special payload shrouds.

8. With respect to your question as to the priority and scheduling of U.S. launches of European payloads,^{3/} we would deal with these launchings on the same basis as our own. Each launching would be treated in terms of its own requirements and as an individual case. When we know when a payload will become available and what its launch window requirements will be, we would schedule it for that time. We expect that conflicts would rarely arise, if at all. If there should be a conflict, we would consult with all interested parties in order to arrive at an equitable solution. On the basis of our experience in scheduling launchings, we would not expect any loss of time because of such a conflict to be significant.

9. In lieu of launch services, we would also be prepared to sell appropriate U.S. launch vehicles from our family of available expendable vehicles for use by the European countries in launching their payloads from launch sites available to the Europeans. In this circumstance we would consider that the same arrangements would apply as for launch services, i.e.: those described in paragraphs 1-6 above and 11-15 below.

^{3/} "What priority will be given to Europe in the assignment of launchers available at the time of its request and also in the schedule of launches?"

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With respect to your question as to licensing the production in Europe of standard U.S. launch vehicles,^{4/} we consider this matter separate from that of European participation in the post-Apollo program. Such a question would have to be judged on its own merits and in terms of a specific proposal. We would be willing to receive such a proposal and would consider it carefully without a priori reservations. Such a proposal would be largely a commercial matter and, since it would not involve new technology, would not be of interest to the U.S. as a cooperative project.

Bearing of the INTELSAT Agreement Upon the Availability of Launch Services --

11. In the case of the INTELSAT Agreement as it may bear on the availability of U.S. launch services for European communications satellites we assume that the definitive arrangements for INTELSAT which are now being negotiated would apply. In terms of draft article XIV as it is now proposed:

(a) The United States assurance described in paragraph 2 above would apply in those cases where no negative finding is made by the appropriate INTELSAT organ, regardless of the position taken by the U.S. in the vote.

(b) The only qualification to this assurance relates to the unlikely instance in which an applicant for U.S. launch services requests such a launch in the face of a negative finding by the appropriate INTELSAT organ. The U.S. could not obligate itself in advance to assure launch services in such an instance.

^{4/} "Will the American Government authorize American firms to conclude with European firms contracts permitting the construction under license in Europe of standard American launchers?"

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with respect to your question as to our interpretation of the expression "significant economic harm to the global system of INTELSAT" as it now appears in draft article XIV of the proposed definitive arrangements,^{5/} we cannot anticipate now precisely what the U.S. position would be in the case of consultation by a member country with the Assembly of Parties concerning the establishment or acquisition and use of space segment facilities separate from those of INTELSAT for international public telecommunications. To do so would prejudge a hypothetical future situation. We consider that the possibility of domestic, regional or specialized communications satellite systems separate from the INTELSAT system has been accepted in principle. In dealing with specific proposals for such systems the U.S. representatives in INTELSAT would consider the matter seriously and reasonably, and would not adopt an arbitrary position. We would expect other countries to do the same.

13. With respect to your question as to our interpretation of the expression "international public telecommunications" as it now appears in draft article XIV of the proposed definitive arrangements,^{6/} while specific definitions have not yet been agreed, we believe there is a general understanding among the delegations to the INTELSAT Conference that, for purposes of the definitive INTELSAT arrangements, international public telecommunication includes those telecommunication services, fixed and mobile, which can be provided by satellite to meet the communication needs of

^{5/} "What is the interpretation given by the American Government to the expression 'significant economic harm to the global system of INTELSAT' which appears in article XIV of the intended agreement in terms, for example, of the proportion (percentage) of global income of INTELSAT?"

^{6/} "What is the interpretation given by the American Government to the expression 'international public telecommunications' which appears in article XIV of the intended agreement?"

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The general public or any segment thereof, including telephony, telegraphy, telex, facsimile and data transmission, relay of radio and television programs, and leased circuits for any of these purposes.

14. In contrast, specialized communication services are understood to include all telecommunication services other than public telecommunication services which can be provided by satellite, including, but not limited to, aeronautical, maritime, radio-navigation, space research, and broadcasting services. We consider that in the future such specialized communications services and other satellite applications might also be provided by INTELSAT, if the members agree, but would not become a special or exclusive function of INTELSAT. In any case, this would be a matter for the member countries to decide.

15. With respect to your question whether we would support a change in draft article XIV of the proposed definitive arrangements in order to assure that the opinion of the Board of Governors with respect to questions of "economic harm" is adequately substantiated,^{1/} we would be reluctant to see this question reopened. This would have to be done within INTELSAT where the matter has already been discussed thoroughly during the current negotiation of definitive arrangements. Any recommendations by the Assembly of Parties with respect to "economic harm" must take into account the advice of the Board of Governors and

^{1/} "On the slight chance that Assembly of Parties might take a political decision under an 'economic' pretext, is it possible that the American Government would propose or support an amendment to article XIV of the intended agreement in order that the opinion of the Board of Governors which precedes these recommendations of the Assembly be substantiated?"

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should be based on findings as to fact, not on political considerations. If such findings should be the subject of serious debate among the member countries in both the Board of Governors and the Assembly of Parties, we would adhere to the language and intent of article XIV, and would expect other countries to do the same.

Decision-making and Management --

16. We consider that the European role in decision-making and management should relate to, and be commensurate with, the measure and character of European participation. Although we would not expect to set any minimum level for European participation, we seek substantial participation, and intend that the arrangements for collaboration should assure consultation in the development of the Space Transportation System and Space Station wherever of significant, mutual concern to both parties.

17. Europe should be associated with the major decision-making bodies concerned with the overall planning and management of the development of either, or both of, these systems, depending on whether Europe decides to participate in the development of one, or both, of them. There should be an extensive role for Europe in the management of those aspects of these systems in which European contractors will be involved, either directly under European governments or working as sub-contractors to American prime contractors in integrated programs. Clearly, any decisions which affect European participation directly must be made jointly.

18. In addition, wherever there is a basis for European use of the Space Transportation System or Space Stations, we would expect Europe to take part in mission planning and experimental programs in generous proportion to their use.

us, there could be a substantial role for Europe in decision-making and management. If, as seems likely, the U.S. input to the development of these systems and the U.S. use of these systems when developed will be significantly greater than the European input and use, overall responsibility for management of the post-Apollo program would necessarily rest with the U.S.

20. With respect to Lord Bessborough's question concerning the percentage of European participation in management bodies and the effect of decisions, taken in areas in which there is no direct European participation, upon European financial obligations and access to facilities,^{8/} we feel that Europe must be a partner in reaching any decisions which have a measurable impact upon European costs or upon European tasks in discharging their commitments to the program. Joint decision-making in these instances should not be permitted to have the effect of a unilateral veto in the case of normal over-runs which are experienced by contractors and sub-contractors on either side. There must, however, be provision for agreement by both parties in cases where changes in specifications would create different requirements than those to which they committed themselves in the initial agreement. In these latter cases that there would have to be some appropriate arrangements to pursue other alternatives in the event agreement cannot be reached.

8/ "Is it possible to be more specific about what is meant by the statement that all countries would participate in the decision-making process and management to a degree commensurate with their contributions to, and use of, the Space Transportation System and Space Station?"

"Does this mean, for example, that if Europe contributed 10% Europe would have 10% of the members of all management boards or only those, including the governing board, in which it would be directly involved? In such cases, would decisions taken in areas in which Europe was not directly participating and which led to cost escalation involve increased financial participation for Europe (or alternatively reduced rights of access to facilities)?"

ss to Information and Facilities --

21. One of our major objectives in suggesting collaboration in the post-Apollo program has been to make optimum use of the resources and skills of both Europe and the U.S., including the application of existing technological capabilities and the generation of new technology. To this end we feel, not only that each participating party must have detailed access to technical data and facilities which they would need to accomplish their specific tasks under the agreed collaboration, but should also have general access to all technology and facilities in the overall development of the program.

(a) By detailed access we mean access to design, development and production data to the level of commercial know-how.

(b) By general access we mean access through visitation and published or publishable documentation, but not including detailed access as defined above.

22. In both cases access to technical data and facilities should be pursuant to terms of a government-to-government agreement providing assurance that these technical data would not be transferred to countries not participating in the agreement. Data which might be sensitive in terms of national security considerations should be exchanged, but handled within agreed security safeguards. Proprietary rights to inventions, innovations, technical data and copyright should be protected, but provision should be made for their sale or exchange among participants in the development of these systems on the basis of non-exclusive royalty-free licenses when desirable for furthering the agreed collaborative program. Arrangements for use of such proprietary rights for purposes

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outside the agreed program should be made according to normal commercial practices.

23. With respect to Lord Bessborough's question as to the measure of European access to technical information,^{9/} the arrangements suggested above should assure both an exchange of technical information adequate to a general understanding of the overall program by all participating countries and an exchange of detailed information (i.e.: to the level of commercial know-how) commensurate with the measure and character of their participation. They would not assure that all participating countries would have full access to, and unrestricted use of, all technology generated in the total program. Rather, each participant in the collaboration would acquire detailed information to the measure of his contribution and of his needs to fulfill the tasks which he undertakes. Each participant would benefit in terms of development of technological know-how to the extent of his investment and participation, and would thus set for himself the extent of his acquisition of commercial know-how.

9/ "Could what has been said about exchange of information be spelt out more clearly? Is it implied that there will be a general exchange of technical information, but that detailed technical information will be exchanged only on those parts of the programme in which Europe participates? This would seem to mean that Europe would give the U.S. detailed information about all the work it does but the reverse would not apply.

We feel that participating countries should have the right to full access to, and unrestricted use of, all know-how, design rights, etc. generated by part of the post-Apollo programme. Is this the intention?"

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... We do not expect that the effect of these arrangements would be as suggested in Lord Bessborough's question, i.e.: "that Europe would give the U.S. detailed information about all the work it does, but the reverse would not apply." Rather, we expect that each would provide detailed information relevant to, and needed for, the tasks of the other. Proprietary interest and production rights, premised on the successful completion of development tasks and established for some reasonable period of time to be agreed, would provide commercial protection through commitments by the parties to acquire items from the designated developer for the full period agreed.

Cost Estimates and Schedule for Development of the Space Transportation System and Space Station --

25. With respect to your question as to cost estimates and schedules, ^{10/} the following preliminary estimates for the development costs of the Space Shuttle, Space Station and Space Tug were prepared for the Space Task Group Report which was submitted to the President in the Fall of 1969. These are developmental costs only and do not include cost estimates for production, facilities and operations:

(Billions of Dollars)										
Fiscal Years -	<u>1972</u>	<u>73</u>	<u>74</u>	<u>75</u>	<u>76</u>	<u>77</u>	<u>78</u>	<u>79</u>	<u>80</u>	<u>81</u>
Shuttle	.2	.9	1.2	1.4	1.3	1.0				=6.0
Space Tug (earth orbital and lunar landing versions)					.1	.2	.5	.9	.9	.5 =3.1
Space Station (incl. experiments and experiment modules)										
	<u>.1</u>	<u>.2</u>	<u>.8</u>	<u>1.1</u>	<u>1.3</u>	<u>1.1</u>				=4.6
	.3	1.1	2.0	2.5	2.7	2.3	.5	.9	.9	.5=13.7

10/ "What is the last evaluation of the cost and schedule of the program (post-Apollo)? Can the cost be divided into an annual base? In the breakdown of this evaluation of costs, what is approved at the present time, and by whom?"

26. It should be noted that under the plan developed for the Space Task Group Report, costs for development of the Shuttle and Space Station peak at about the same time. To avoid this undesirable peaking, we expect to concentrate our efforts first on Shuttle development and to proceed with Space Station development somewhat later than indicated by the funding shown above. We expect that the studies now in progress will better define costs as well as configurations, but we do not expect that the cost estimates will be appreciably altered.

(a) The Space Tug described in the Space Task Group Report is a large multi-purpose modular system, operated in both manned and unmanned modes. Such a Tug not only could perform functions in earth orbit, but also could operate to the moon including delivery of personnel and cargo to the lunar surface. Therefore, the Tug envisioned in the Space Task Group Report is a much more extensive development than one designed to be carried as an intergal unit internal to the Space Shuttle and primarily used to transfer unmanned payloads from low earth orbit to geostationary orbit. Interest in the early years of Space Shuttle operation has now become focused on this latter much simpler Space Tug, the development cost of which are estimated at less than \$1 billion.

(b) We are also considering a modular concept for the Space Station which would permit build-up of the Station from modules small enough to be transported by the Space Shuttle.

27. The Fiscal Year 1971 NASA Authorization Act contains \$110 million for studies of the Shuttle-Station concepts. The Fiscal Year 1971 appropriation is still pending in the Congress.

Third Party Participation --

28. With respect to your question as to the implications of participation by third countries upon U.S.-European collaboration, 11/ we would like

11/ "What would the implication be on the agreements to be concluded with the United States and Europe of the participation of third countries on the post-Apollo program?"

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to accommodate broad foreign participation, and per suggestion for collaboration in the post-Apollo program is, as you are aware, open to non-European countries (particularly Canada, Australia, and Japan). Since we do not yet have a clear view as to the measure of their interests, it seems premature to attempt to deal specifically with this question at this time. In principle, we would expect third countries to participate in aspects of the program which did not duplicate those which the Europeans might previously have decided to undertake. Should third country participation require some degree of involvement in the European effort as well as our own, we would, of course, seek agreement with the Europeans. Third country participation would not in any event, be at the expense of Europe's proceeding with tasks respecting which a firm European commitment had been established. I suggest that we both keep this question in mind for further consideration in the event any third country indicates a significant interest in participating.

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I trust, Mr. Minister, that this statement of our present views will be useful in your preparations for the November meeting of the European Space Conference. We will await the results of that meeting. Meanwhile Mr. Pollack and his colleagues in NASA, the Office of Science and Technology and the Staff of the Space Council stand ready for such further discussion or exchange of views as may be useful to you. He will shortly provide comments to your Conference Secretariat on their draft Summary Record of the September 16-17 discussions.

May I assure you that we, here, feel that those discussions were useful for us all.

Sincerely,

U. Alexis Johnson